ciating pain in the head of the colon from inflammation, which terminated in gangrene of one spot about the size of a crown, from which the fæces had escaped, and were found amongst the intestines on the right side.

The friends gave me liberty to inspect the body after death. Its size was like that of a half hogshead, and as protuberant as that of a dropsical person, as hard as a drum, with the skin as tense as it seemed possible to draw it, and quite polished. I made a longitudinal incision from the ensiform cartilage to the pubes, and a cross one from side to side: the muscles were quite absorbed, and the skin and peritoneum perfectly transparent, and each as thin as a wafer, so that they might almost be torn like paper.

The spectacle which presented itself was very singular, but consistent with what might have been expected: the sigmoid flexure of the colon was so much enlarged with flatus at its upper part as to become quite displaced from the left side; but taking its curve as usual on the left side above, the upper part lay completely across the abdomen, like the transverse arch, but upon that part: when it had got to the right side, it again curved towards the left ileum, or rather to the middle of the pubes, and terminated in the enlarged rectum at the bone of the sacrum. Its upper part, which crossed the abdomen, was so distended with flatus as to be nine inches in diameter; and the lower part, which descended to the rectum, and was filled with pultaceous fæces, was about ten inches and a half, but where it joined the rectum six inches. Nothing could be seen on first opening the abdomen but this portion of the intestine; a small part of the ileum, where it joins the head of the colon; the enlarged head of the colon and the anterior part of the enlarged rectum, the latter seen only because of its enlargement. The rectum was six inches in diameter above, gradually getting smaller towards the anus, which would not more than admit the thumb, though immediately above, it completely filled the cavity of the pelvis. The head of the colon was about nine inches in diameter, and it, as well as the transverse arch, was filled, (I ought to say crammed,) with fæces of moderate consistence, having only a few scybala, not sufficient to have produced irritation as a cause of the prevailing inflammation. The stomach, though an immense cul-de-sac, and appearing as if it had been much distended, was more than half empty, and the duodenum, jejunum and ileum quite so, and their coats perfectly healthy, only thickened in their muscular and mucous structures, as were also the large intestines. The fæces were not inordinately offensive, considering the length of time they had remained in the bowels, nor, excepting the rectum, were they near so concrete as might be expected; but in this gut they were literally as hard as wood, and would require the chisel or hammer to break them in pieces.

Her appetite had always been tolerably good, nor did she refrain from any common diet that presented itself, though generally she lived on fat pork and vegetables.—*Lond. Med. Gaz. Nov.* 24, 1832.

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15. *A New Species of Emphysema developed after abundant Hæmorrhage.* By M. E. Rebolle de Gex.—Case I. *Profuse epistaxis; death; gas in the whole venous system.*—Ducret, æt. 15, was admitted in the Hôtel-Dieu, with continued inflammatory fever, which was relieved by leeches, abstinence and rest; but it was followed by an attack of quotidian fever, which quickly yielded to the exhibition of salicine. The patient was still occasionally subject to epistaxis, with which he had been attacked previous to the occurrence of the fever; and, at the time he was about to quit the hospital, he was found in the night bathed in his blood. The quantity of blood he had lost was very great. The nostrils were immediately plugged, and the patient was thus saved from immediate death.

On the following day, he was in a state of great exhaustion: the eyes were dull, his strength gone, and the pulse at the wrist thready and wavering; it was evident that he could not long survive. In the course of the day, general œdema began to be manifested: he became weaker and weaker, and died on the third day.

Dissection fifteen hours after death.—The body presented no appearance of putrefaction. Almost every part was œdematous; the lungs most so, and next the cellular tissue. In the right auricle and ventricle of the heart, a clot of feeble consistence was found, and of a light colour: this clot was emphysematous; it contained numerous small cells. A smaller clot, of the same kind, was found in the left auricle. The vena cava, subclavian, axillary, and internal jugular veins, as well as the iliac and femoral, contained, in different points of their course, many small bubbles of air, which were separated from each other by small drops of blood, the colour of which was less black than natural. The appearance was more marked in the smaller veins: it resembled a spirit of wine thermometer, into which air has been inserted bubble after bubble. Upon dividing the vessels, gas escaped mixed with blood. No air could be detected in the arteries.

Another case of a similar kind, and experiments upon animals, lead to the same conclusion, that gas is present in the circulating system after profuse hæmorrhages. But what is the nature of this gas? Is it atmospheric air introduced by absorption, or is it the result of spontaneous formation, consecutive to hæmorrhage? This question might have been solved by chemical experiments; but M. Rebolle, probably, could not collect a sufficient quantity of the gas for that purpose. He shows, by the following experiment, that the gas could not be atmospheric air absorbed by the vessels from which the bleeding proceeded. After having exposed the two crural veins of a young dog, he plunged him up to the neck into a bath at twenty degrees: he then divided the crural veins, and the crural artery, without removing the creature from the water. After death, the heart and venous system contained gas, as in other cases. Still this experiment does not show, as M. R. imagines it does, that the presence of the air must be attributed to pulmonary absorption: he should first have proved the existence of atmospheric air, or its element, in the blood-vessels. But whatever may be the cause to which we attribute the presence of air in the blood-vessels, the following case cannot be uninteresting.

CASE II. *Schirrous tumour on the back; removal of it followed by considerable hæmorrhage; emphysema; death. The emphysema depending on the presence of inflammable gas.*—Duclos, æt. 25, of a strong constitution, had a very large tumour removed from his back, on the 25th of February: the tumour was very extensive, and the operation lasted forty-five minutes. There was great difficulty in securing the divided vessels, and the hæmorrhage was profuse. For a long time the patient remained in a state of alarming syncope.

26th. Rather better; belly supple, retracted, and not tympanitic. The trunk of the body and the limbs were a little augmented in size, and crepitated upon being pressed; the impression of the finger was immediately effaced. The crepitation was so distinct that, when the nurses were assisting the patient to rise from bed, they thought some of his bones were fractured: and the same [illegible] continued until his death, every time he moved. The dressings were [illegible] a reddish-looking serum, which flowed abundantly from the wound.

From this time, the progress of the case was unfavourable: a gas [illegible] odour issued from the wound, and the man died on the 2[illegible]

Dissection six hours after death.—Thermometer indicating two degrees [illegible] zero. Emphysema less evident than during life, and only visible in the [illegible] and at the upper part of the thigh on the side operated upon. At these points the skin was tense, and elevated by numerous small phlyctenæ, close t[illegible] and containing reddish serum. The flaps of the wound had not adhered to the parts beneath; they were livid, and partially gangrenous. In every point of the cellular tissue where a bistoury was introduced, gas escaped, and, upon the approach of a candle, there was a slight detonation, and it burnt with a brilliant flame of a bluish-white colour, whiter at its summit and bluer at the base. From the scrotum and the left thigh the jet of gas was stronger, and lasted longer. The gas was completely inodorous. Muscular system healthy, but the colour of the muscles not so red as usual, and their fibres were separated by welldefined intervals. When cut upon, the same kind of sound was produced as upon the division of muscles that have been slightly frozen. When the muscles were pressed before a light, there was a sparkling and cracking like that which is caused by squeezing out the essential oil from orange-peel before a taper. Upon opening the head, the cerebrum powerfully raised the dura mater; and wherever this membrane was divided, a hernia cerebri occurred. The brain was light, and when an incision was made into its substance, a slight noise was heard, similar to that from the section of the muscular tissue; but, upon pressing portions of the cerebral substance before a bougie, neither crackings nor sparks were produced. No gas in the cavities of the heart. In the right auricle and ventricle were two coagula; the largest was in the ventricle, and its size was about that of a filbert. This coagulum was emphysematous; for upon being brought into contact with a light, and pressed, sparks were emitted and a crackling noise. The blood-vessels were empty. The small transparent veins appeared to contain the same gas. The abdomen was slightly tympanitic, and upon being punctured, and a light brought near, a clear and bluish smoke was seen, and the puncture was slightly enlarged by the combustion of its edges, which were also blackened. The small intestines contained a very trifling quantity of pus.

It is to be regretted that an accident happened to a vessel in which some of the gas was set aside, for the purpose of ascertaining its precise nature.

This case certainly merits the attention of physiologists, if it were only on account of the presence of the inflammable gas; and those physicians who have thought that spontaneous combustion depended upon inflammable gas being developed in the cellular tissue will here find some support to their theory.—*Gaz. Méd. Tom. III. No.* 103.

MATERIA MEDICA.

16. *Experiments on Hemlock and Henbane.*—Professor Geiger, of Heidelberg, whilst recently engaged in making chemical experiments, succeeded in establishing some remarkable illustrations of the active principle of hemlock. Its base is an organic salt, which opens an entirely novel series of these highly interesting organic substances, for it is volatile, and similar to a volatile oil. The peculiar qualities of this substance, both intrinsically, and when brought into combination with acids, its rapidly changeable character, and the brilliant play of colours which it exhibits whilst undergoing change, render it one of the most interesting productions in organic chemistry. Its poison is of the deadliest description. The smallest quantity, applied inwardly, produces paralysis; and one or two grains are sufficient to kill the largest animal. Another of Professor Geiger's late discoveries is the active principle of henbane, (*atropin;*) its base is likewise an organic salt, but it is tenacious, admits of being reduced to a crystal, forms a crystalline salt with acids, like hemlock, and has a disagreeable smell, though it is not volatile, unless it be subjected to decomposition. Its poison is quite as deadly as that of the former, but exhibits dissimilar appearances, and is not so rapid in its effects. Animals, where even a minute dose is administered, become languid, cannot stand upon their legs, are attacked by convulsions, and die within six hours. The effect of this poison in dilating the pupil of the eye, is extremely remarkable. The minutest portion of it, when applied to the eye of a cat, produces a dilatation of the pupil for the next four and twenty hours; and the hundredth part of a grain prolongs the appearance for the next seven or eight days, besides inducing other singular symptoms of poisoning.—*Rep. Pat. Invent. March*, 1833.

17. *Constituents of Opium.*—M. Pelletier in an elaborate memoir on opium printed in the *Annales de Chimie*, mentions the following principles as contained